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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/842,955	04/25/2001	Osamu Koshiba	TI-29265	8656

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TEXAS INSTRUMENTS INCORPORATED
P O BOX 655474, M/S 3999
DALLAS, TX 75265

EXAMINER

LE, VU

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 07/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/842,955

Applicant(s)

KOSHIBA ET AL.

Examiner

Vu Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5-8 is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☒ Claim(s) 3 and 4 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Information Disclosure Statement

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

The listing of references appears in the specification, pages 1 and 2. They have not been considered.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Ueno et al., US 5,990,962.

Re claim 1, Ueno et al discloses a method of preprocessing for motion-compensated video encoding (fig.1 and/or 2) comprising: (a) providing a frame in a video sequence for motion-compensated encoding ("INPUT"); (b) for a pixel in said frame, comparing a difference between (i) the value of said pixel and (ii) the predicted value of said pixel from motion compensation prediction of said frame to a first level (col.7, lines 13-17, note: in Ueno, the motion compensation prediction error is the difference between a pixel value of the input video frame and a pixel value of the motion compensated predicted picture); (c) when said comparing of step (b) indicates said difference is greater than said first level, apply lowpass filtering to said pixel (col. 6, lines 22-25, col. 7, lines 17-20, note: in Ueno, the comparison to a predetermined threshold value inherently determines whether motion compensation prediction error is greater than said threshold prior to lowpass filtering) ; and (d) repeating steps (b)-(c) for other pixels of said frame (fig. 1 and/or 2, note: in Ueno, preprocessing 11 is inherently an iterative process); (e) motion-compensated encoding of said frame after said filtering (12).

Re claim 2, the method of claim 1, wherein: (a) said filtering of step (c) of claim 1 is filtering is both spatial in said frame and temporal over other frames of said video sequence (fig. 1:14, col. 6, lines 4-25, note: in Ueno, the filter 14 acts to filter spatially the input image signal, and temporally, the motion compensated predicted signal).

Allowable Subject Matter

5. Claims 3-4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

For claims 3-4, the prior art of record fails to anticipate or render obvious the limitations as claimed:

"(a) for said pixel, comparing said difference to a second level which is less than said first level; and (b) when said comparing of step (a) indicates said difference is greater than said second level but less than or equal to said first level, comparing the magnitude of the motion vector for the block containing said pixel to a first threshold; (c) when said comparing of step (b) indicates the magnitude of said motion vector is greater than said first threshold, spatial lowpass filtering to said pixel; and (d) wherein said step (e) of claim 1 encoding applies to said frame after filtering by both steps (b)-(d) of claim 1 and foregoing steps (a)-(c)."

6. Claims 5-8 are allowed.

The prior art of record fails to anticipate or render obvious the limitations as claimed:

"...comparing a first difference between (i) the value of said pixel and (ii) the value of said pixel in a frame prior to said frame to a temporal threshold; (c) when said

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comparing of step (b) indicates said first difference is greater than said temporal threshold, comparing a second difference between (i) the value of said pixel and (ii) the predicted value of said pixel from motion compensation prediction of said frame to a first level; (d) when said comparing of step (b) indicates said second difference is greater than said first level, apply lowpass filtering to said pixel; and (e) repeating steps (b)-(d) for other pixels of said frame; (f) motion-compensated encoding of said frame after said filtering."

Contact

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vu Le whose telephone number is 703-308-6613. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 703-305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to be 'Vu Le', with a stylized, cursive-like script.

Vu Le
Primary Examiner
AU 2613
(703) 308-6613
Vu.Le@uspto.gov